

Navajo Abandoned Uranium Mine

Site Screen Report

This form is for use at the site of abandoned uranium mines (AUM) located on Navajo Nation lands. Applicable sites include all mine and mine features that have or have not undergone reclamation by the Navajo Abandoned Mine Lands Reclamation Program, including features, adits, pits and waste piles. Applicable sites also include all AUM sites listed in the USEPA CERCLIS database, all sites listed in the 2008 AUM GIS Report issued by USACOE and USEPA, all AUM sites on allotment lands associated with the Navajo Nation, and any and all AUM sites not listed in any database located on Navajo lands. Reconnaissance of any sites located on lands adjacent to Navajo lands that may be impacting Navajo lands will need to be coordinated with the authorities appropriate to those lands.

The purpose of the form is to ascertain the status and location of the identified AUM site, and record all immediate site information associated with the mine site. Decisions and recommendations on what additional steps are needed will be provided on a separate document.

North Martin AUM Site

Navajo AUM Northern Region

Prepared by:

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Contract: W91238-06-F-0083

12767.063.496.1111

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Part I Site Identification, Location and Status**Site Names and ID numbers as applicable****Mine ID:** 57**Map ID:** N42**CERCLIS:** NNN000908961**Navajo Abandoned Mine Land Reclamation Program:** NA-0915**Local name / Aliases:** AEC Plot 2; AEC Plot #2**Chapter and local area:** Sweetwater**County:** Apache **State:** Arizona**Lat/Long:** 36.884610326 N / -109.293503866 W**Nearby road and highway:** Highway 160 **Local Post Office:** Teec Nos Pos**Surface Land Status: check one or more and provide ownership and contact information below**

| | | | |
|----------------------------|-------------------------------------|------------------------|--------------------------|
| Tribal Trust Land | <input checked="" type="checkbox"/> | Public lands | <input type="checkbox"/> |
| Private | <input type="checkbox"/> | Tribal Fee Land | <input type="checkbox"/> |
| Bureau of Land Mgmt | <input type="checkbox"/> | Allotment | <input type="checkbox"/> |
| State | <input type="checkbox"/> | Fee land | <input type="checkbox"/> |

Subsurface Mineral Rights:

No information on subsurface mineral rights ownership was found in the EPA/AUM Database.

Claim and operator information:

The mine site surface land status is classified as Tribal Trust Land. Historical documents showed the operator of the mine as Curran Brothers & Wade from 1942 to 1943. No other historical ownership / lease information was identified in the EPA/AUM database.

Number of residential structures within 200 feet of mine: None**Estimated volume of mine waste onsite:** 500 yd³

Part II Summary of radiological readings

Highest gamma radiation measurement:

260,107 counts per minute (cpm)

Describe any other radiological measurements:

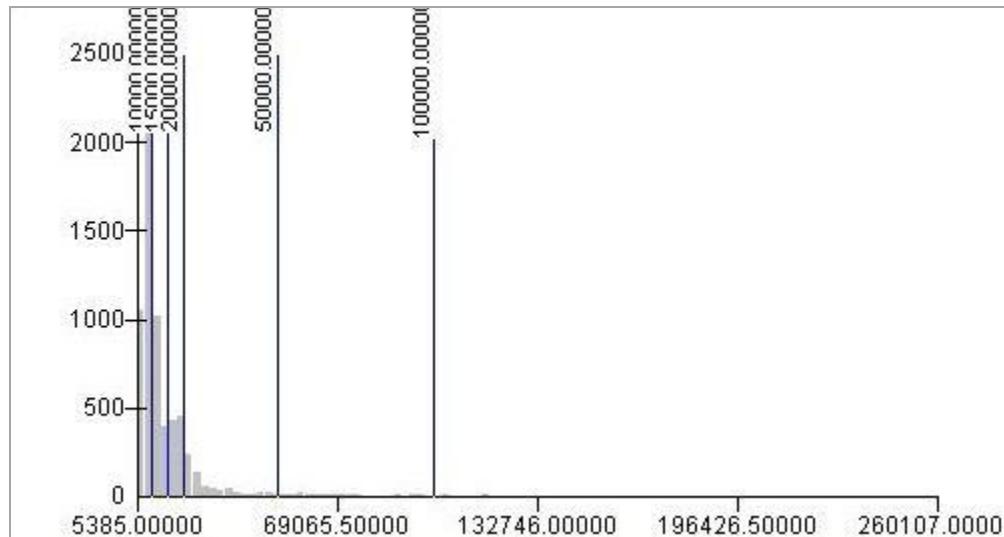
A total of 6,357 gamma radiation measurements were collected from the mine site, ranging from 5,385 cpm to 260,107 cpm. Measurements collected in the vicinity of the waste debris were found at levels up to approximately 250,000 cpm, and in the excavation pit at levels up to approximately 10,000 cpm. The measurements are represented in Figures 1 and 2.

Background Locations
#1 8,374 cpm

Average background = 8,374 cpm

Distribution Chart and Statistics:

The following chart and statistics were generated by ESRI ArcGIS 9.3.1, and show the general distribution of the site gamma radiation measurements. The horizontal X axis represents the gamma radiation reading levels in cpm (lowest levels to the left). The vertical Y axis represents the frequency of each gamma radiation level.



| | |
|---------------------|-----------------|
| Count: | 6357 |
| Minimum: | 5385.00000 |
| Maximum: | 260107.00000 |
| Sum: | 106700750.00000 |
| Mean: | 16784.76483 |
| Median: | 10552.00000 |
| Standard Deviation: | 22890.12939 |

Part III Status of Reclamation and Mine Waste

The following information was obtained from the Navajo Abandoned Mine Land Reclamation Program (NAMLRP) Point Features Database:

NAMLRP Status of the mine site: Reclaimed : Yes Waste Pile onsite : Yes

NAMLRP Project Number: NA-0915

NAMLRP Mine features: 1 Portal, 3 Prospects

The following information was obtained from field observations collected during the 2010 site screening:

Provide description and status of all mine sites and features at site. Include all waste piles, adits, pits and other features, and indicate whether they are open, closed, covered, capped, buried or unreclaimed. Indicate approximate size, shape and extent, including description of any reclamation caps. Note condition of all caps.

Observed reclamation work and status:

Adits

None

Waste Piles

Waste piles on both sides of excavation, over-steepened and failure cracks along upper edge

Pits

None

Shafts

None

Other Debris and Mine Features

Excavation pit over large part of mesa

Part IV

Site observations and Environs

Observed Structures: list number of and describe human habitation status of structures at the following distances from mine:

0 to 200 feet: None

200 feet to 0.25 mile: Peter Willie home approximately 1,000 ft N of site

Observed Public or commercial structure: list and describe all schools, clinics, Chapter Houses, places of business and any other structure used by members of the community at the following distances:

0 to 200 feet: None

200 feet to 0.25 mile: None

Levels measured around the perimeter(s) of the identified structure(s):

Consistent with background levels

Observed water sources: list the number and type of wells and surface water sources that are potentially used for human consumption at the following distances from the mine:

0 to 0.25 miles: None

0.25 miles to 4 miles: None

Sensitive environments: note and describe all sensitive environments located within visible range of the mine site, including: wetlands, endangered species, habitats and approximate locations of sites that may be under protection of the government of the Navajo Nation.

None observed

Known Site History: include information from interviews with Chapter officials and residents. Note information on mine ownership, type of mining operation, period of operation, known amount of production, and any other information as provided.

North Martin mine consists of an area of 33,370.6 m². The mine was identified as being operational in 1943. Historical documents showed the operator of the mine as Curran Brothers & Wade from 1942 to 1943. While operational, the mine had a total reported production volume of 388 tons. No other historical information or any additional ownership / lease information was identified in the EPA/AUM database.

Part V Response Action Summary

Site Name(s): North Martin

Chapter: Sweetwater

Decision Criteria

Is there an unreclaimed waste pile at the site? Yes

At what distance from the waste pile is the nearest residential structure located? 1,000 ft

At what distances from the waste pile are there potential drinking water sources? None

Is there a reclamation cap or sealed adit in place at the site? No

Is the cap/seal functionally intact? None

Is the cap/seal sufficiently degraded to create a concern about releases? No

At what distance from the cap/seal is the nearest domestic structure located? None

At what distance from the cap/seal is the nearest domestic drinking water source? None

Summary of emergency response factors

None

Summary hazard ranking system factors

None

Summary of reclamation factors

Unreclaimed waste rock

Part VI Photos



Photo 1. North Martin mine site



Photo 2. North Martin mine site, waste pile



Photo 3. North Martin mine site



Photo 4. North Martin mine site



Photo 5. North Martin mine site, fence line



Photo 6. North Martin mine site



Photo 7. North Martin mine site, buried water line running through site



Photo 8. North Martin mine site



Photo 9. North Martin mine site, waste pile



Photo 10. North Martin mine site, house N of site

Part VII Contacts Reports and InformationName: Stanley Edison (928) 871-6861Eugene Esplain (928) 871-7331Title or official role (if any) Navajo EPA Superfund ProgramAddress PO Box 2946, Window Rock, AZ 86515Information provided Lead Regulatory AgencyName: Peter WillieTitle or official role (if any) Local ResidentAddress PO Box 429, Teec Nos Pos, AZ 86514Information provided Mr. Willie lived at the mine until 1963. He stated the mine was active in 1956. He has had water pumped in for 10 years, and used to use a well around the canyon. He also stated he would like a copy of the report.

Name_____

Title or official role (if any) _____

Telephone number_____

Information provided_____

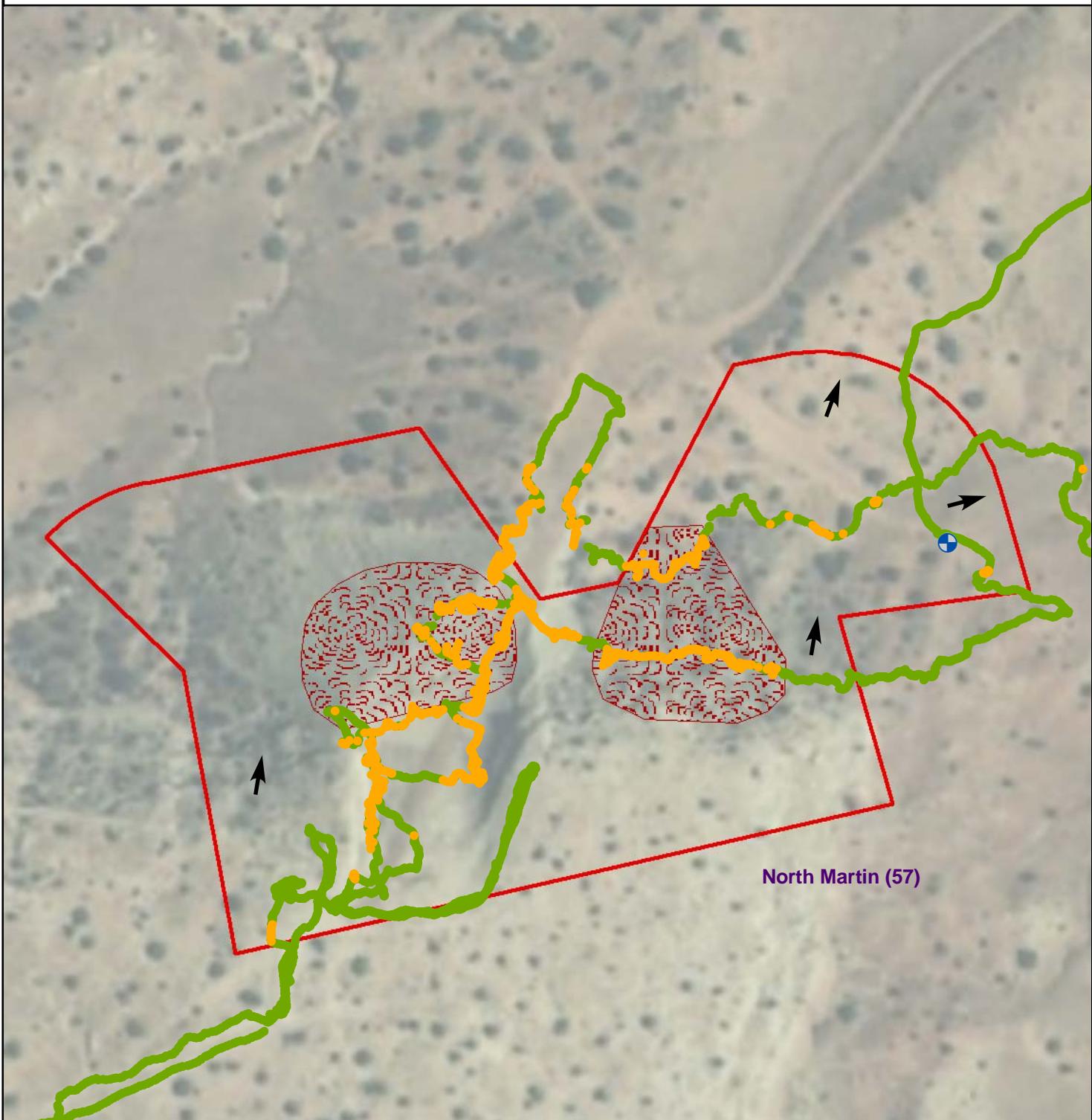
Name_____

Title or official role (if any) _____

Telephone number_____

Information provided_____

Figure 1 - Gamma Radiation Measurements, Above Two Times Background
North Martin (57)
Sweetwater / Teec Nos Pos Chapter, Navajo Nation



Legend

Gamma Radiation Measurements

- < 2X Background
- > 2X Background

Gamma survey conducted 06/2010
Measured as counts per minute (cpm)

Average background = 8,374 cpm

- Observed Well
- Observed Waste Pile
- General Direction Down-Slope
- Mine Claim Boundaries
- ▨ Inaccessible due to steep grades

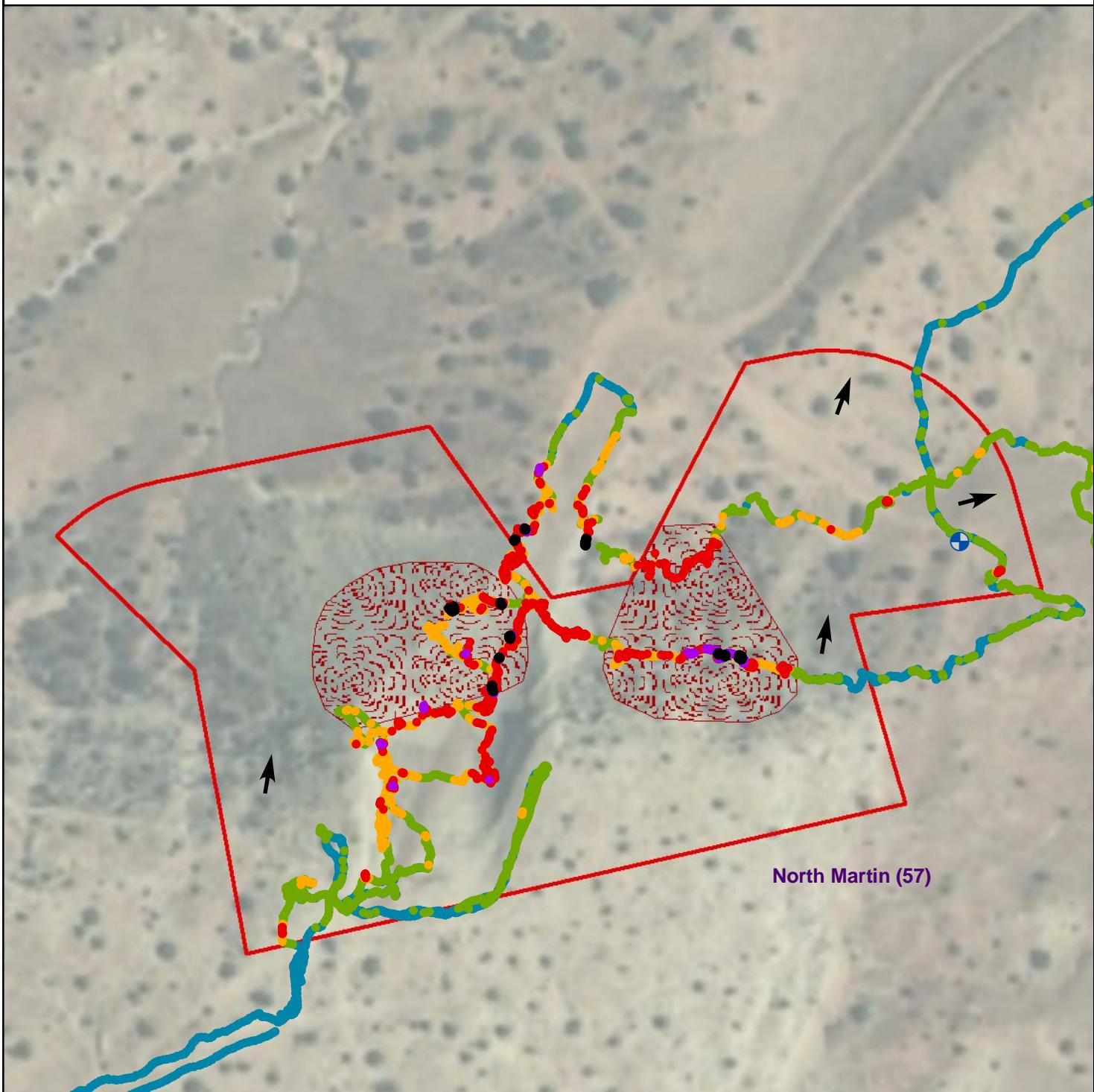


0 250 Feet



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Figure 2 - Gamma Radiation Measurements
North Martin (57)
Sweetwater / Teec Nos Pos Chapter, Navajo Nation



Legend

Gamma Radiation Measurements

- 0 - 10,000
- 10,000 - 15,000
- 15,000 - 20,000
- 20,000 - 50,000
- 50,000 - 100,000
- > 100,000

- Observed Well
- Observed Waste Pile
- General Direction Down-Slope
- Mine Claim Boundaries
- Inaccessible due to steep grades

Gamma survey conducted 06/2010
Measured as counts per minute (cpm)

Average background 8,374 cpm



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